

2008 Annual Consumer Confidence Report on the Quality of Tap Water

Distributed on Fairchild Air Force Base, Washington

Introduction

Water provided by the Fairchild AFB public water system (ID# 243500) is safe to drink and meets all requirements set by the Safe Drinking Water Act (SDWA) and Washington State Department of Health (DOH).

This is an annual report on the quality of water delivered by Fairchild AFB, WA. Under the "Consumer Confidence Reporting Rule" of the federal SDWA, community water systems are required to report this water quality information to the consuming public. Presented in this report is information on the source of our water, its constituents and the health risks associated with any contaminants.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include: (a) microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; (b) inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; (c) pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; (d) organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; (e) radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health as those limits set by the EPA for public water systems. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

We continually monitor the drinking water for contaminants. Our water is safe to drink; however, some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. Environmental Protection Agency/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline.

Fairchild AFB's drinking water comes primarily from five groundwater wells, drawing water from the underground Spokane Valley-Rathdrum Prairie and Hangman Creek Aquifers. When consumption dictates, additional water is obtained from the West Plains Aquifer. The water is chlorinated for disinfection purposes and fluoridated before pumping into storage tanks and the distribution system.

Monitoring of Your Drinking Water

Fairchild AFB water system uses only EPA-approved laboratory methods to analyze your drinking water. Our personnel take water samples from numerous points within the distribution system and at previously identified housing residents' taps. These samples are then transported to an accredited laboratory where the full spectrums of EPA approved water quality analyses are performed.

Some of the monitoring groups sampled at Fairchild AFB are provided in the table below and are monitored using EPA-approved methods. Monitoring includes, but is not limited to, the following analytes/contaminants:

Analyte Monitoring Groups

Analyte/Contaminant Group
Biological contaminants (total coliform group) ¹
Radiological
Lead and copper
Inorganic contaminants (IOCs) ²
Synthetic Organic Compound (SOCs) ³
Volatile Organic Compounds (VOCs) ⁴
Disinfection byproducts & disinfectant residuals
Turbidity

1 Contaminants in this group include total coliform, fecal coliform, and heterotrophic bacteria.

2 Contaminants in this group include metals and nitrate.

3 Contaminants in this group include such compounds as herbicides, pesticides, and insecticides.

4 Contaminants in this group include such compounds as benzene, carbon tetrachloride, and trichloroethylene (TCE).

Source Water Assessment

Fairchild AFB's Wellhead Protection Plan was approved by the Washington State DOH on 21 May 1997. An update was prepared on 17 Dec 2001 and again in Jan 2008. The plan and associated updates were prepared to comply with the federal Safe Drinking Water Act Amendments of 1986. In Washington, the DOH's Office of Drinking Water implements these requirements through the Washington State Wellhead Protection Program. The goal of the Wellhead Protection Plan is to prevent contamination of the groundwater that is used by Fairchild AFB to supply drinking water to base residents, workers, and visitors. It addresses:

- (1) Delineation of wellhead protection areas
- (2) Inventory of potential sources of contamination
- (3) Informing interested parties regarding delineation and inventory findings
- (4) Contingency plans for alternate water sources
- (5) Emergency spill response measures.

Current risks to the main well field are all in the low range. Twenty-four commercial and/or industrial locations were originally evaluated as potential sources of contamination to the main well field. Several of these were eliminated from further consideration. The area has been reinspected twice over the past four years. No existing commercial and/or industrial operations were identified that would pose a risk to the quality of water pumped from the alternate well field.

If you require further information on the quality of our source water, a copy of the source water assessment or wellhead protection plan can be obtained by contacting: 92d Civil Engineer Squadron, Programs Development Element (92 CES/CEPD) at (509) 247-4537, Fairchild AFB, WA 99011.

Definitions of Key Terms

To gain a better understanding of the contents of this report, several key terms must be defined. They are as follows:

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCL's are enforceable standards.

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

Action Level (AL) - The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Variances and exemptions - State or EPA permission not to meet an MCL or treatment technique under certain conditions.

Please note that variances and exemptions are not the same as reduced monitoring waivers. Variances and exemptions are permissions granted by the Washington State DOH or the EPA to exceed an MCL under certain conditions. Fairchild AFB currently has no variances or exemptions. Reduced monitoring waivers are granted because sample results from the Fairchild AFB water system have consistently been below MCLs for certain contaminants.

Additional Acronyms/Terms Used In This Report

Below is a listing of acronyms and terms (with explanations) used in this Consumer Confidence Report.

µmhos/cm	micromhos per centimeter; a measurement of the rate at which a small electrical current flows through a solution
mg/L	milligrams per liter; a unit of measure equivalent to part per million (ppm)
µg/L	micrograms per liter; a unit of measure equivalent to part per billion (ppb)
MFL	million fibers per liter; a measure of asbestos in water
SDWA	Safe Drinking Water Act; Federal law which sets forth drinking water regulations
TTHMs	total trihalomethanes; byproducts of drinking water disinfection
Level Found	laboratory analytical result for a contaminant; this value is evaluated against an MCL or AL to determine compliance.

The following tables represent the results of our monitoring for the reporting period of calendar year 2008 (i.e., 1 January 2008 to 31 December 2008). (NOTE: The sample dates prior to 2008 are listed for your information only and there were no requirements to repeat these samples in 2008.) The state allows us to monitor for some contaminants either initially or less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, is more than one year old. Please note that none of the constituents listed below exceeds the MCL.

Results Table from Main Well Field

Contaminant	MCLG	MCL	Level Found	Sample Date	Exceeded Standard?
Iron	0.3 mg/L	0.3 mg/L	0.3 mg/L	13 Apr 06	No
Arsenic	0.01 mg/L	0.01 mg/L	0.002 mg/L	13 Apr 06	No
Nitrate (as Nitrogen)	10 mg/L	10 mg/L	0.904 mg/L	8 Jul 08	No
Sulfate	250 mg/L	250 mg/L	12 mg/L	13 Apr 06	No
Conductivity	700 µmhos/cm	700 µmhos/cm	278 µmhos/cm	13 Apr 06	No
Total trihalomethanes (TTHMs)	0	80 µg/L	0.55 µg/L	19 Aug 08	No
Asbestos (Total)	7.0 MFL	7.0 MFL	0.083 MFL	13 Nov 04	No

Results Table from Alternate Well Field

Contaminant	MCLG	MCL	Level Found	Sample Date	Exceeded Standard?
Sulfate	250 mg/L	250 mg/L	18 mg/L	13 Apr 06	No
Conductivity	700 µmhos/cm	700 µmhos/cm	223 µmhos/cm	13 Apr 06	No
Total trihalomethanes (TTHMs)	N/A	80 µg/L	2.41 µg/L	19 Aug 08	No
Iron	0.3 mg/L	0.3 mg/L	0.2 mg/L	13 Apr 06	No
Manganese	0.05 mg/L	0.05 mg/L	0.02 mg/L	13 Apr 06	No

* Over 90 Synthetic Organic Compounds (SOCs) were sampled for during July 2007. None of these compounds were detected above the laboratory detection limits.

* Over 120 Volatile Organic Compounds (VOCs) were sampled for during July 2007. None of these compounds were detected above the laboratory detection limits.

Common Sources for Detected Contaminants

We monitor for various contaminants in the water supply to meet all regulatory requirements. Common sources for detected contaminants can include the following:

- Biological contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm run-off, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water run-off, and residential uses.
- Organic chemicals, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water run-off and septic systems.
- Radioactive materials, which can be naturally occurring or be the result of oil and gas production and mining activities.

It is important to note that our system had no regulatory violations during the past year. The table lists only those contaminants that had some level of detection. The EPA has determined that your drinking water IS SAFE at these levels. Many other contaminants have been analyzed also, but were not present or were below the detection limits of the analytical equipment.

Alternate Water Source

During water contingencies, Fairchild AFB can be supplied by the City of Spokane Water system by use of an intertie. 1,959,269 gallons of Spokane water was used in 2008 to supply Fairchild AFB. For information about Spokane water quality or their current CCR contact the City of Spokane Water Department at (509) 625-7800 or www.spokanewater.org.

Public Involvement

This Consumer Confidence Report was prepared by TSgt Brian Ewing of the 92d Aerospace Medicine Squadron's Bioenvironmental Engineering Flight. For additional information regarding this report, or if you have any questions or concerns regarding this report, please contact the Bioenvironmental Engineering Flight at (509) 247-2391. We think it is important for our consumers to be informed about the quality of their water. Because we distribute such high quality water on our base, we do not hold any regularly scheduled meetings to discuss water quality issues with the base populace. If you want to learn more about your drinking water, please contact Lt Col Crist or TSgt Ewing at the above number to discuss your concerns and/or questions.